

Amendments to the Claims:

Please amend the claims as follows:

1. (Currently amended) ~~An improved turbine engine system comprising a compressor stage having low and high pressure compressors, a turbine stage having high and low pressure turbines, and topology, wherein the improvement comprises a repositioning, with respect to a conventional intercooled regenerative turbine engine topology, of exhaust gas output from a low pressure turbine stage to a regenerator, whereinto an exhaust gas output from the a high pressure turbine flows stage to the regenerator before returning to the low pressure turbine.~~
2. (Currently amended) The engine system topology of claim 1 further comprising, as an intermediate stage between the high pressure turbine and the low pressure turbine, a feedback control system, whereby the exhaust gas output from the high pressure turbine stage to the regenerator flows through the feedback control.
3. (Currently amended) The engine system topology of claim 2 further comprising an additional cooler and an additional exhaust gas output in the feedback control, whereby exhaust gas flows from the feedback control through the additional cooler to athe high pressure compressor stage.
4. (New) The engine system of claim 2 further comprising a bottoming cycle system and an additional exhaust gas output in the feedback control, whereby exhaust gas flows from the feedback control through the bottoming cycle to the high pressure compressor stage.
5. (New) The engine system of claim 4 further comprising, in the bottoming cycle system, an exhaust gas condenser.
6. (New) In a conventional intercooled regenerative turbine engine system, the improvement comprising a bottoming cycle system whereby exhaust gas flows from a high pressure turbine stage through the bottoming cycle to a high pressure compressor stage.
7. (New) The engine system of claim 6 further comprising, in the bottoming cycle system, an exhaust gas condenser.
8. (New) The engine system of claim 6 wherein the bottoming cycle is further comprised of an organic fluid closed loop and a bottoming turbine.

9. (New) The engine system of claim 8 wherein the turbine exhaust gas flows through a heat exchanger in the bottoming cycle and thereby transfers heat to the organic fluid closed loop.
10. (New) A turbine engine system comprising a compressor stage having low and high pressure compressors, a turbine stage having high and low pressure turbines, and a regenerator, wherein an exhaust gas output from the high pressure turbine flows to the regenerator a through feedback control system before returning to the low pressure turbine.
11. (New) The engine system of claim 10 further comprising an additional cooler and an additional exhaust gas output in the feedback control, whereby exhaust gas flows from the feedback control through the additional cooler to the high pressure compressor stage.
12. (New) The engine system of claim 11 further comprising a bottoming cycle system, wherein the cooler and an additional exhaust gas output in the feedback control are part of the bottoming cycle system, whereby exhaust gas flows from the feedback control through the bottoming cycle to the high pressure compressor stage.
13. (New) The engine system of claim 12 further comprising, in the bottoming cycle system, an exhaust gas condenser.
14. (New) The engine system of claim 10 further comprising a bottoming cycle system and an additional exhaust gas output in the feedback control, whereby exhaust gas flows from the feedback control through the bottoming cycle to the high pressure compressor stage.
15. (New) The engine system of claim 14 further comprising, in the bottoming cycle system, an exhaust gas condenser.
16. (New) The engine system of claim 14 further comprising, in the bottoming cycle system, an exhaust gas condenser and an organic fluid closed loop with fluid cooler, wherein the exhaust gas condenser and the organic fluid cooler are combined by running a cooled organic fluid loop from the cooler through the exhaust gas condenser to absorb heat from the exhaust gases.
17. (New) The engine system of claim 16 further comprising, in the bottoming cycle system exhaust gas condenser, a cooling air loop from the fluid cooler that passes through the exhaust gas condenser to pre-cool exhaust gases before they pass through the cooled organic fluid loop in the condenser.